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**(54) PRODUCTION OF RARE EARTH SINTERED  
MAGNET**

(57) Abstract:

PURPOSE: To produce the rare earth sintered magnet having excellent magnetic characteristics by subjecting a mixture composed of rare earth raw material powder and mineral oil to wet compacting in a oriented magnetic field and sintering the compact, thereby preventing the oxidation and moisture adsorption of the compact and improving the preservable property thereof.

CONSTITUTION: The raw material body for the rare earth sintered magnet of an R-Fe-B system (R is  $\geq 1$  kinds of rare earth elements including Y) is wet pulverized by using mineral oil or synthetic oil. The raw material body is otherwise mixed with the mineral oil, etc., after dry pulverizing. The mineral oil or synthetic oil having 2 350°C fractional distillation point and 210cSt dynamic viscosity at room temp. is used. The resulted mixture of the powder and the oil is packed and compacted under pressurization in a cavity while the powder is held oriented by impressing a magnetic field for orientation thereto. The compact of the wet state obtd. in such a

manner are subjected to a deoiling treatment by holding for  $\geq 30$  minutes at and under 100 to 500°C and  $2 \times 10^{-1}$  Torr in a nonoxidizing atmosphere or reducing atmosphere and are then sintered. The heating up rate of a temp. range from ordinary temp. up to 500°C is kept at 2 10°C/min at this time.

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